

Abstract of The Invention

The invention is directed to a coated metal fluoride crystals that are resistant to laser-induced damage by a below 250 nm UV laser beam; methods of making such coated crystals, and the use of such coated crystals. The method includes the steps of providing an uncoated metal fluoride crystal of general formula MF_2 , where M is beryllium, magnesium, calcium, strontium and barium, and mixtures thereof, and coating the uncoated metal fluoride crystal with a coating of a selected material to thereby form a coated metal material resistant to laser induced damage. Preferred coating materials include MgF_2 , MgF_2 doped fused silica and fluorine doped fused silica.